

REMARKS

Reconsideration of the application is requested.

Claims 1-23 are now in the application. Claims 1 and 14 have been amended. Claims 21-23 have been added.

Support for the amendments to claims 1 and 14, as well as for the new claims, is clearly found in the specification. The specific embodiment described on pages 9-16 deals with a motor vehicle access system in which a unit transmits an interrogation signal. All of the transponders within range and of the proper type (i.e., the transponders that are configured to receive the signal) respond with the complete response signal. The response is simultaneous in that the interrogation signal has already "ordered" all of the receiving transponders to respond. This is effectively the synchronization of the responses. Each of the transponders remits its entire, complete code. Several complete access codes are received at the motor vehicle. If at least one of them matches (it may also be more than one that match), the access control system allows access to the motor vehicle. In this regard, "access" may mean any of a number of different processes, for example, opening the doors, turning off the alarms, preparing for engine start, disarming the immobilizer, etc..

This brings us to the specifics of the Office action. First, the Examiner responded to our previous arguments. The Examiner essentially stated that some of the arguments presented were not properly supported in the claims and that applicants' reading of the claimed subject matter was apparently narrower than the Examiner's reading. Upon carefully reviewing those remarks, we have rewritten the claims to yet more particularly point out and claim what applicants consider their invention.

As pointed out above, the claims have been amended to include the requirement that an entire, complete response code signal be sent back. In addition, the complete signal - if it is found to be a match - then triggers the access authorization. In the Examiner's words, the claims now call "for a response code signal that comprises a transponder's identification" and they no longer simply call for the transponders to simultaneously transmit "a signal" that may read on the individual bit transmission found in Dodd et al..

The 4-bit response according to the prior art disclosure of Dodd et al. does not correspond with the code signal appearing in the claims. Instead, it is an identification whether during the request for a bit location of the code,

one or more transponders respond because, in each case, a bit location of the code signal of the transponder is sequentially interrogated. If a transponder has the given bit location, then a response is sent. That response may, for instance, consist of a 4-bit signal (column 5, lines 62-66).

The response, even when it is a 4-bit or even a 16-bit word, is not the complete code. Dodd et al. explain:

Further security is provided by a verification procedure in which a transponder replies to the final interrogation with a 16-bit reply e.g. generated from the seed provided at the beginning of the search, from an internally stored or hidden 16-bit code e.g. and, if desired, from the public transponder identity code. According to the stored algorithm this can only occur at the last search level because only then can no more than one transponder reply at a time.

Col. 6, lines 27-35 (double emphasis added).

In other words, the entire stored algorithm (code) can only be transmitted back to the interrogation device when a single transponder responds. Otherwise, the interrogation device cannot receive the code perfectly and cannot decide with regard to the authorization. When several transponders respond, the individual bit locations must at first be interrogated again sequentially, and several responses are sent to the interrogation device.

But, then again, this is exactly where the instantly claimed invention sets itself apart. Applicants transmit a single interrogation signal whereupon all transponders which receive this interrogation signal are synchronized and all of them transmit back simultaneously their complete response signal (code). Thus, the response signals of several transponders overlap without knowing how many transponders and which transponders are present near the interrogation station. Since all transponders which are each assigned to a vehicle, have the same code, access authorization or clearance can be given once the complete code is received. The source of the proper code is of no import, that is, it is of no relevance from which transponder the code arrives.

The Dodd et al. teaching, in contrast, requires a sequential interrogation of all bit positions of the code of all transponders in range if several transponders respond simultaneously. Even if only one transponder is nearby, the interrogation is performed by bit until it is clarified which transponder is nearby. A person of ordinary skill in the art will therefore not gain from Dodd et al. any suggestion towards modifying the process and the system. If anything, Dodd et al. rather teach away from the invention. In Dodd's system, the complete code signal can only be transmitted completely in the last search level, when no more than one

transponder responds ("only then can no more than one transponder reply at a time").

Once more in summary, the claims are directed to an access control system and a corresponding method, as well as to a motor vehicle access authorization system, in which an interrogation unit transmits an interrogation code signal that can be received by transponders that are within range. As soon as the transponders receive the interrogation signal, they are instructed by the information in the interrogation signal to respond with their response signal simultaneously (this corresponds to synchronization). The response signals each contain the entire code which serves as authorization for operating the access control system. In a more specific detail (claims 6 and 22) an embodiment is claimed which calls for the subcarrier frequency and the carrier frequency. The frequency image with the carrier and the subcarrier is certainly not found in the reference.

Having thus removed Dodd et al. as an anticipatory reference and, furthermore, having pointed out that the primary reference indeed teaches away from the claimed invention, we are firmly convinced that all of the rejections have been overcome. None of the additional references provide any teaching that would modify - and in fact reverse - the Dodd

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et al. teaching with the hierarchical and sequential querying of the individual transponders.

Our prior arguments concerning the secondary references and their possible combinations are herewith incorporated by reference. It is believed that none of the references, whether taken alone or in combination, show or suggest the features of independent claims 1, 14, 21, and 23. These claims are patentable over the art. The dependent claims are patentable as well because they all are ultimately dependent on the independent claims.

In view of the foregoing, reconsideration and allowance of claims 1-23 is solicited.

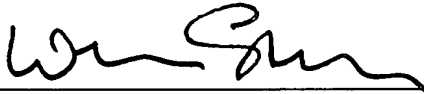
In the event the Examiner should still find any of the claims to be unpatentable, and particularly in light of the considerable prior efforts in this case, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

If an extension of time is required for this paper, petition for extension is herewith made.

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Enclosed herewith is a counsel's payment for the extra three claims and the extra independent claim being added with the amendment. Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,



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